Practice: 378 - Pond

Scenario # 1 Embankment, 4"-6" Pipe

Scenario Description: **Missouri**

A low-hazard water impoundment structure on agricultural land to improve water quality and to provide water for livestock, fish and wildlife, recreation, fire control, crop and orchard irrigation, and other related uses. An earthen embankment will be constructed with a principle spillway conduit and earthen auxiliary spillway, as designed. The resource concerns addressed include inadequate livestock water, excessive suspended sediment and turbidity in surface water, damage from sediment deposition, and reduced capacity of conveyances by sediment deposition.

Before Practice Situation:

Area exists where water could naturally pool or run off to create a pond for livestock, wildlife, fire control or irrigation. Failure of the embankment will not result in loss of life or damages of any kind.

After Practice Situation:

The typical low hazard pond is constructed by excavating the pool area, constructing the auxiliary spillway, preparing the foundation as designed, and using 5000 cubic yards to create an embankment. The product of the storage times the effective height of the dam is less than 3,000. The effective height of the dam is 35 feet or less. The principle spillway is installed using an approved conduit material. The earthen auxiliary spillway will be constructed as designed. Vegetation will be completed under critical area planting (342). Other associated practices include 382, 516, 521A, 533, 614, 587, 396.

Scenario Feature Measure:

Embankment Volume

Scenario Typical Size:	5000	Cubic Yard	Tot Unit Cost	$3.67

Cost Category	Component Name	Quantity	Unit	Unit Cost	Cost
Materials	Pipe, PVC, 6", SCH 40	100	Foot	$5.31	$531.00
Equip./Install.	Scraper, pull, 7 CY	78	Hour	$15.39	$1,200.42
Equip./Install.	Earthfill, Manually Compacted	20	Cubic yard	$4.83	$96.60
Equip./Install.	Dozer, 140 HP	8	Hour	$105.67	$845.36
Equip./Install.	Dozer, 200 HP	78	Hour	$160.69	$12,533.82
Labor	Equipment Operators, Heavy	86	Hour	$27.22	$2,340.92
Labor	General Labor	10	Hour	$21.56	$215.60
Mobilization	Mobilization, medium equipment	3	Each	$200.43	$601.29
				Total Cost:	$18,365.01

Payment types:

PayType	Unit Payment	PayType	Unit Payment
EQIP	$2.75	EQIP-HU	$3.31
EQIP-NOI	$2.75	EQIP-HUNOI	$3.31

Practice: 378 - Pond

Scenario # 2 Embankment, 8"-12" Pipe

Scenario Description: **Missouri**

A low-hazard water impoundment structure on agricultural land to improve water quality and to provide water for livestock, fish and wildlife, recreation, fire control, crop and orchard irrigation, and other related uses. An earthen embankment will be constructed with a principle spillway conduit and earthen auxiliary spillway, as designed. The resource concerns addressed include inadequate livestock water, excessive suspended sediment and turbidity in surface water, damage from sediment deposition, and reduced capacity of conveyances by sediment deposition.

Before Practice Situation:

Area exists where water could naturally pool or run off to create a pond for livestock, wildlife, fire control or irrigation. Failure of the embankment will not result in loss of life or damages of any kind.

After Practice Situation:

The typical low hazard pond is constructed by excavating the pool area, constructing the auxiliary spillway, preparing the foundation as designed, and using 5000 cubic yards to create an embankment. The product of the storage times the effective height of the dam is less than 3,000. The effective height of the dam is 35 feet or less. The principle spillway is installed using an approved conduit material. The earthen auxiliary spillway will be constructed as designed. Vegetation will be completed under critical area planting (342). Other associated practices include 382, 516, 521A, 533, 614, 587, 396.

Scenario Feature Measure:

Embankment Volume

Scenario Typical Size:	8000	Cubic Yard	Tot Unit Cost	$3.85

Cost Category	Component Name	Quantity	Unit	Unit Cost	Cost
Materials	Pipe, PVC, 10", SCH 80	100	Foot	$16.37	$1,637.00
Equip./Install.	Scraper, pull, 7 CY	124	Hour	$15.39	$1,908.36
Equip./Install.	Earthfill, Manually Compacted	29	Cubic yard	$4.83	$140.07
Equip./Install.	Hydraulic Excavator, 1 CY	8	Hour	$96.78	$774.24
Equip./Install.	Dozer, 140 HP	12	Hour	$105.67	$1,268.04
Equip./Install.	Dozer, 200 HP	124	Hour	$160.69	$19,925.56
Labor	Equipment Operators, Heavy	144	Hour	$27.22	$3,919.68
Labor	General Labor	16	Hour	$21.56	$344.96
Mobilization	Mobilization, very small equipment	1	Each	$55.50	$55.50
Mobilization	Mobilization, medium equipment	4	Each	$200.43	$801.72
				Total Cost:	$30,775.13

Payment types:

PayType	Unit Payment	PayType	Unit Payment
EQIP	$2.89	EQIP-HU	$3.46
EQIP-NOI	$2.89	EQIP-HUNOI	$3.46

Practice: 378 - Pond

Scenario # 3 Embankment, >12" Pipe

Scenario Description: **Missouri**

A low-hazard water impoundment structure on agricultural land to improve water quality and to provide water for livestock, fish and wildlife, recreation, fire control, crop and orchard irrigation, and other related uses. An earthen embankment will be constructed with a principle spillway conduit and earthen auxiliary spillway, as designed. The resource concerns addressed include inadequate livestock water, excessive suspended sediment and turbidity in surface water, damage from sediment deposition, and reduced capacity of conveyances by sediment deposition.

Before Practice Situation:

Area exists where water could naturally pool or run off to create a pond for livestock, wildlife, fire control or irrigation. Failure of the embankment will not result in loss of life or damages of any kind.

After Practice Situation:

The typical low hazard pond is constructed by excavating the pool area, constructing the auxiliary spillway, preparing the foundation as designed, and using 11,000 cubic yards to create an embankment. The product of the storage times the effective height of the dam is less than 3,000. The effective height of the dam is 35 feet or less. The principle spillway is installed using an approved conduit material. The earthen auxiliary spillway will be constructed as designed. Vegetation will be completed under critical area planting (342). Other associated practices include 382, 516, 521A, 533, 614, 587, 396.

Scenario Feature Measure:

Embankment Volume

Scenario Typical Size:	11000	Cubic Yard	Tot Unit Cost	$4.16

Cost Category	Component Name	Quantity	Unit	Unit Cost	Cost
Materials	Aggregate, Sand, Graded, Washed	16	Cubic yard	$23.82	$381.12
Materials	Pipe, Steel, 18", Std Wt, USED	120	Foot	$40.47	$4,856.40
Equip./Install.	Scraper, pull, 7 CY	170	Hour	$15.39	$2,616.30
Equip./Install.	Earthfill, Manually Compacted	29	Cubic yard	$4.83	$140.07
Equip./Install.	Hydraulic Excavator, 1 CY	8	Hour	$96.78	$774.24
Equip./Install.	Dozer, 140 HP	24	Hour	$105.67	$2,536.08
Equip./Install.	Dozer, 200 HP	170	Hour	$160.69	$27,317.30
Labor	Equipment Operators, Heavy	208	Hour	$27.22	$5,661.76
Labor	General Labor	30	Hour	$21.56	$646.80
Mobilization	Mobilization, very small equipment	1	Each	$55.50	$55.50
Mobilization	Mobilization, medium equipment	4	Each	$200.43	$801.72
				Total Cost:	$45,787.29

Payment types:

PayType	Unit Payment	PayType	Unit Payment
EQIP	$3.12	EQIP-HU	$3.75
EQIP-NOI	$3.12	EQIP-HUNOI	$3.75